Strategies for intensified industry involvement in research and innovation cooperation with Europe

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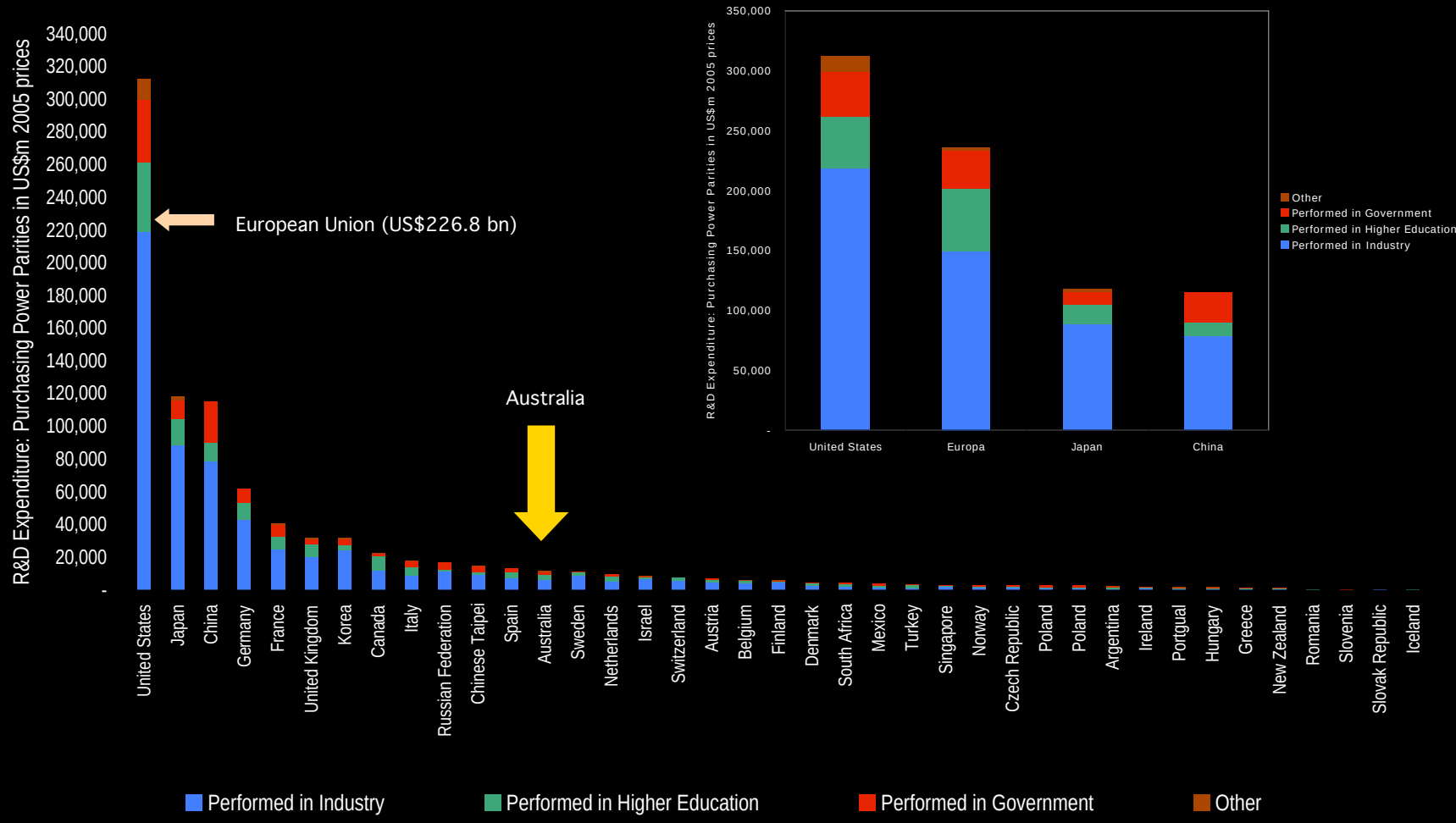
FEAST

FORUM FOR EUROPEAN-AUSTRALIAN SCIENCE AND TECHNOLOGY COOPERATION

WE ARE AT A CRITICAL JUNCTURE

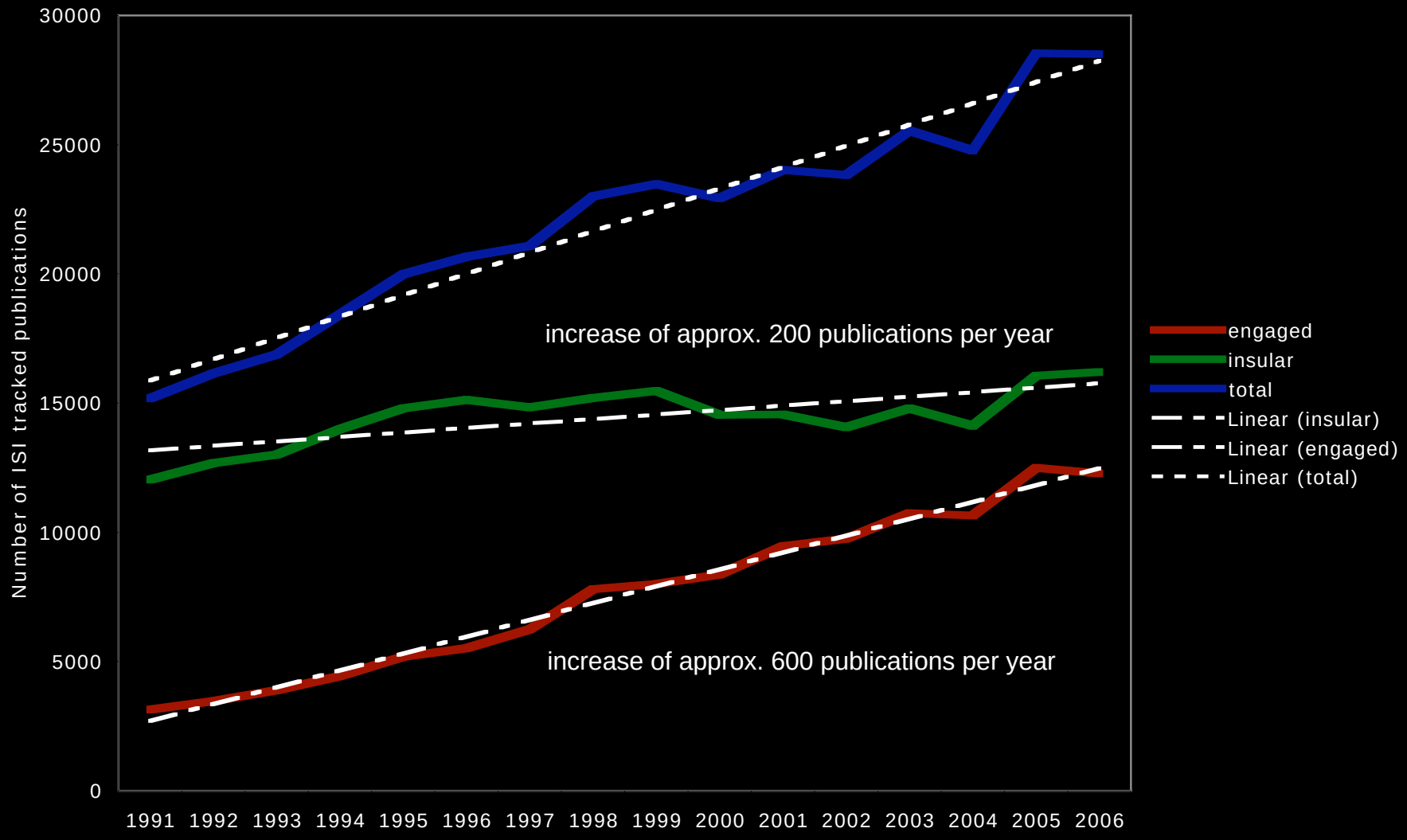
- Academic to academic cooperation between Australia and Europe is fairly well established
- A new government that is enthusiastic about intensified cooperation with Europe
- Review of the National Innovation System
- Ratification of Kyoto (etc): responding to the global challenge
- Intensified industry/business involvement is a priority for achieving concrete outcomes
- Strategy matters: finding the best pathways
- FEAST to be re-funded for another 3 years with an enhanced mission

THE DISTRIBUTION OF GLOBAL R&D BY SECTOR OF PERFORMANCE



Source: OECD Main Science and Technology Indicators Database (Purchasing Power Parity basis)

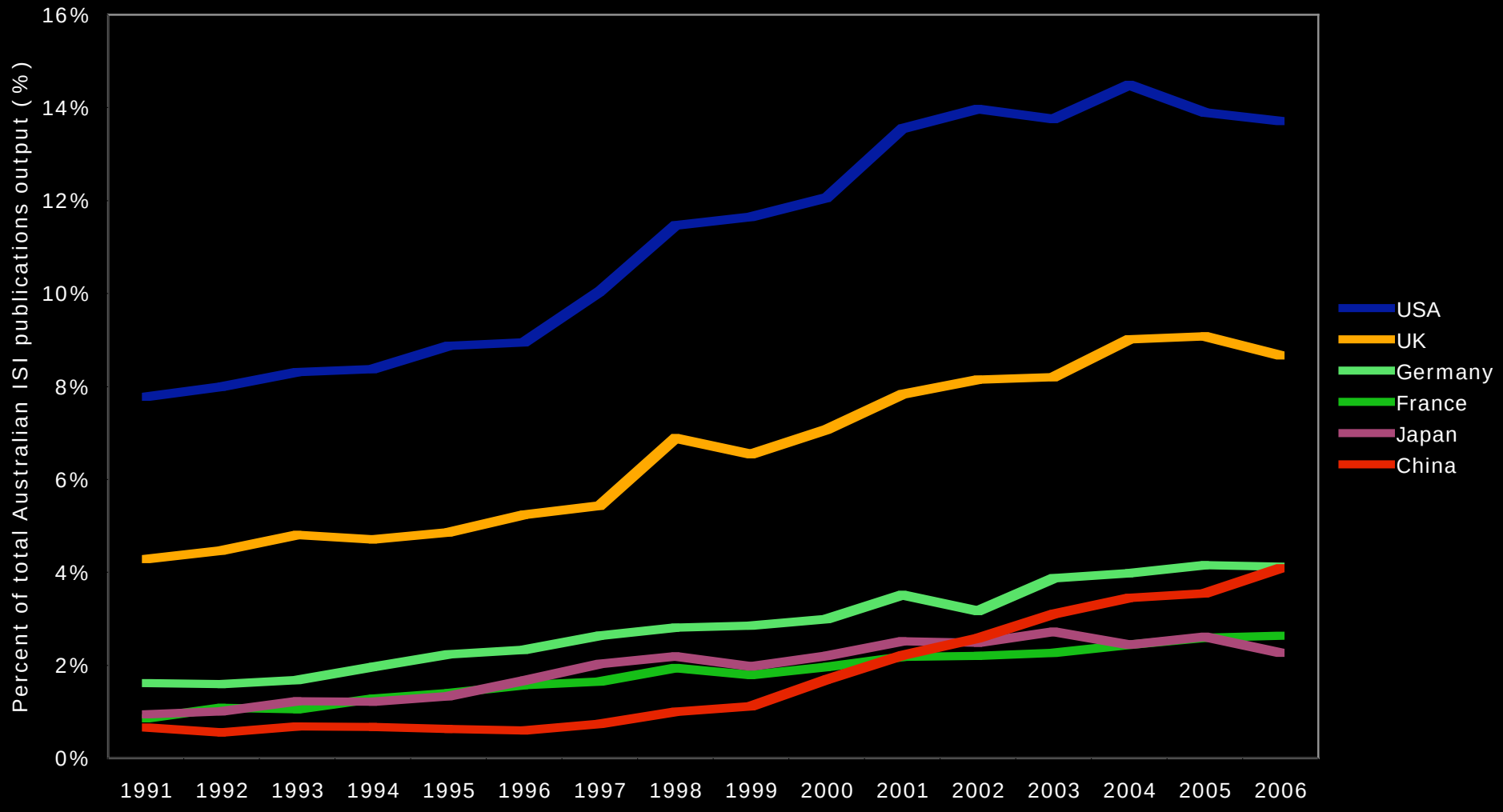
INTERNATIONAL COLLABORATION IS DRIVING AUSTRALIAN PUBLICATION OUTPUT INCREASES



Source: Thomson ISI/ANU Research Evaluation and Policy Programme (REPP)

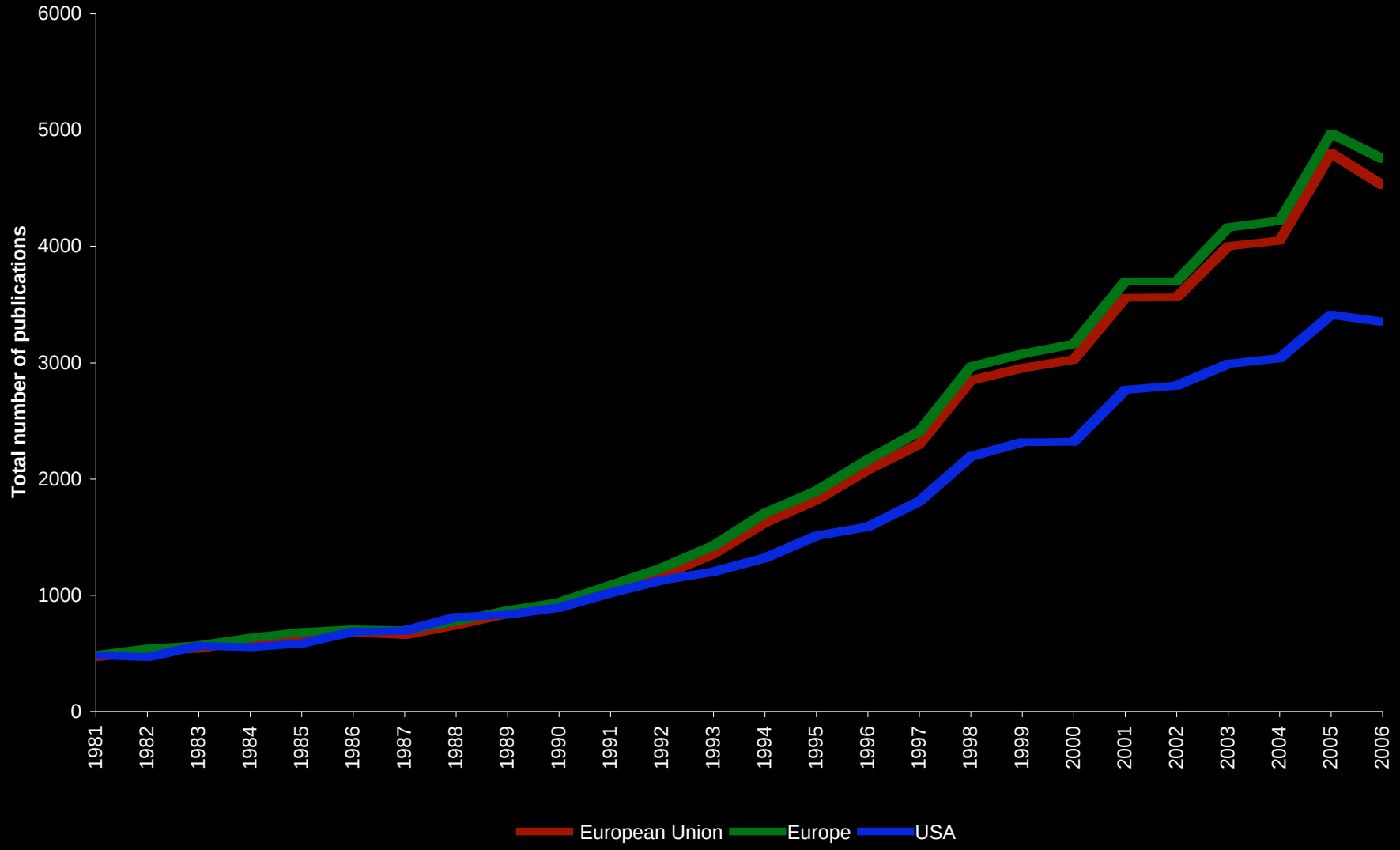
PROFILE OF AUSTRALIA'S KEY COLLABORATION PARTNERS

All fields of research



Source: Thomson ISI/ANU Research Evaluation and Policy Programme (REPP)

AUSTRALIA'S ISI TRACKED JOINT PUBLICATIONS WITH THE USA, EU AND EUROPE (PRELIMINARY ANALYSIS)



Source: Thomson ISI/ANU Research Evaluation and Policy Programme (REPP)

EMERGING BEST PRACTICE IN ACADEMIA

- Assessed through FEAST's consultations on "best practices" (47 FP6 cases examined)
- "Self-reliance" as a goal (lower risk) - try to avoid seeking dedicated funding for international collaboration
- International collaboration should be part of the core business of research (and funders need to recognise this)
- Be clear about collaboration value propositions (what is offered - what may be gained)
- Exploit the capability that you currently have (not that you would like to have)
- Bilateral cooperation is lower risk - and can lead to easier entry into multilateral consortia

BRINGING INDUSTRY INTO THE PICTURE

- Attention in Australia to date has focussed heavily on academic-academic collaboration - involvement with industry via *European partnerships* as an important benefit for Australian academics
- Emergence of major global challenges (e.g. emissions reduction in metals production and re-use)
- Need to balance competition and collaboration in corporate innovation strategies - open innovation is no panacea - but it can be important
- “Risk-aware” International Financial Reporting Standards (IFRS) highlight potential vulnerabilities to Balance Sheets - mitigated by innovation options
- Potential collective benefits in using cooperative R&D to reduce IFRS compliance costs (via shared risk-assessment methods)
- Need new self-reliant business-driven approaches to industry-

COOPERATIVE INNOVATION CONSORTIA?

- Self-reliant approach based upon mutual interest in *industry* - international engagement “mission critical”
- Academic involvement in accordance with a mission, and “rules of engagement”, *defined by business*
- Emulating US *Cooperative Research and Development Agreements* (CRADAs) - a standard legal template designed to reduce the transaction costs of forming and running a consortium (**main role for Govt. is funding template design?)**
- Facility for “mushroom” consortia (appear then disappear according to shared needs) - avoid institutional inertia
- Resource CICs via Australia’s R&D Tax Concession - with clear *global leverage* intentions
- Collectivise shared innovation assets (e.g. pooled IP bundles) to create strong collaboration value propositions vis-a-vis Europe and the US (etc)
- Align international engagement with the trans-national value chains that loop through several national economies

GEOGRAPHY MATTERS

ALMOST ALL R&D IS PERFORMED NORTH OF THE EQUATOR

AUSTRALIA IS CENTRAL TO SOUTHERN HEMISPHERE PUBLIC RESEARCH

ESPECIALLY ON GLOBAL CHANGE

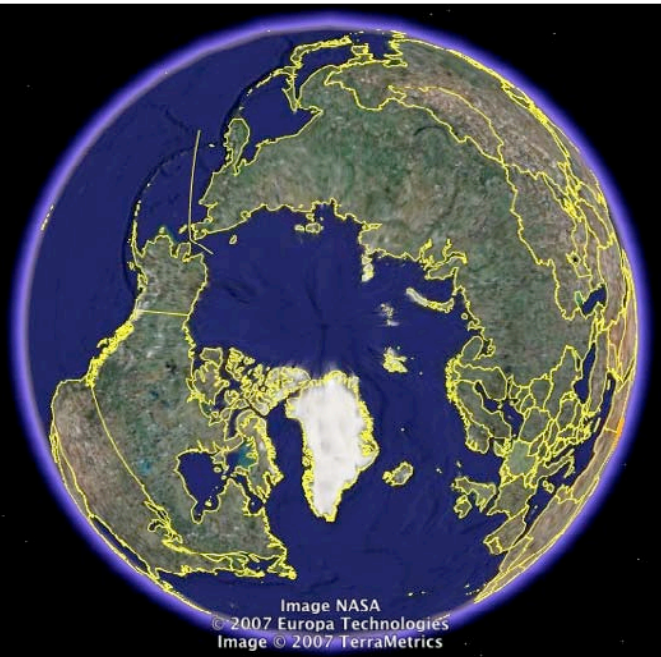



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Image NASA
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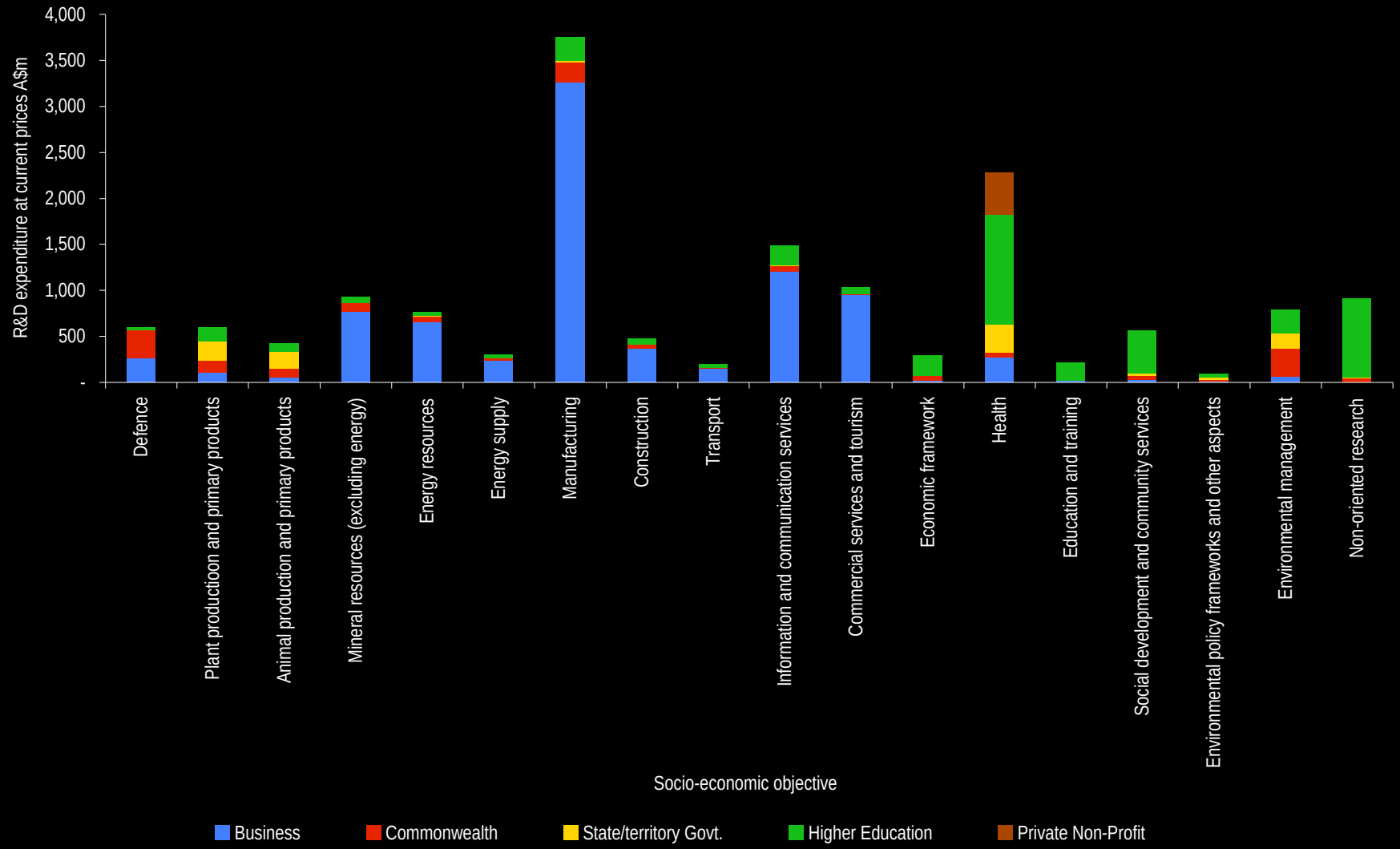
EXTRAS

AUSTRALIAN R&D EXPENDITURE BY SOCIO-ECONOMIC OBJECTIVE AND SECTOR 2004-05

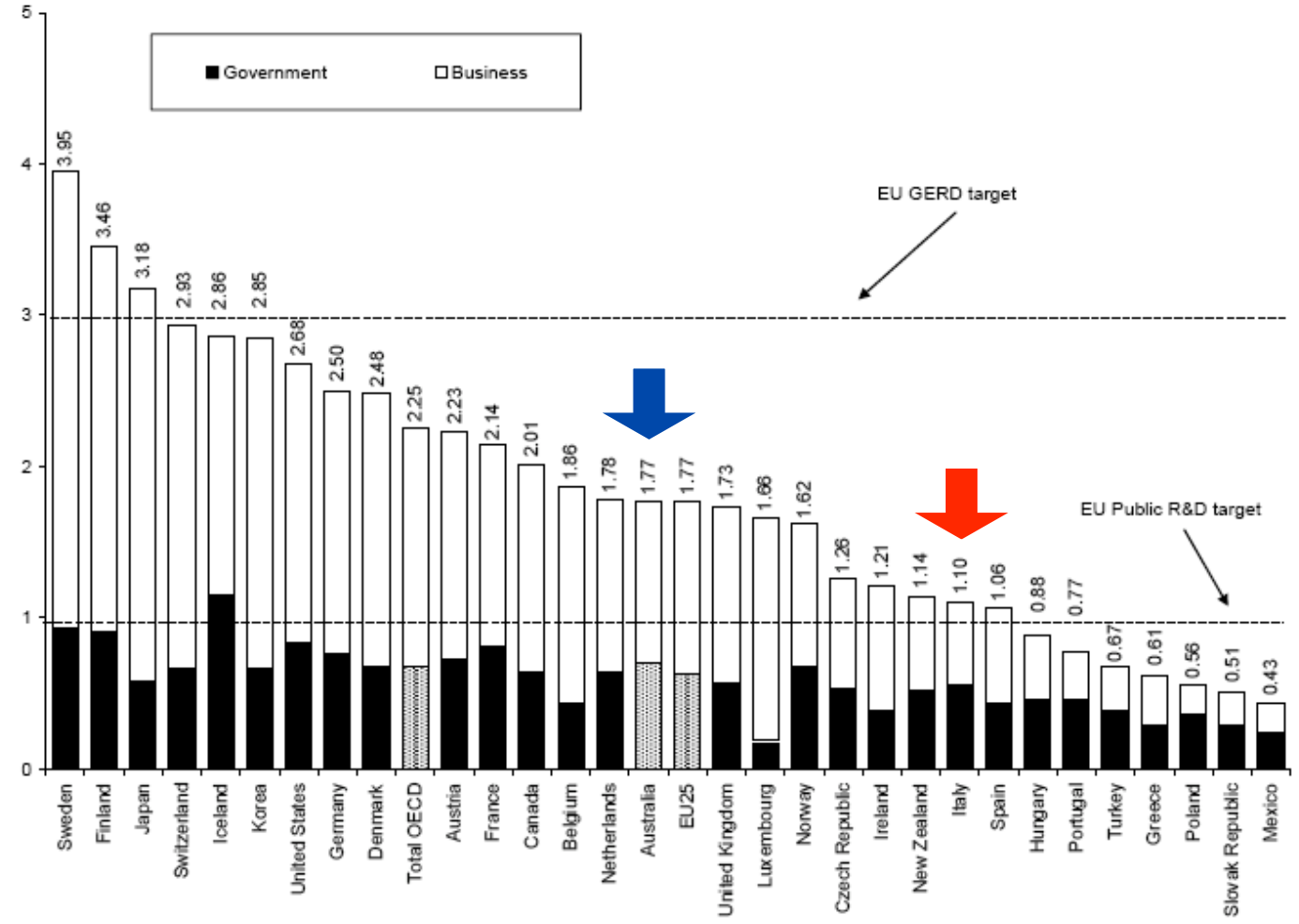


Source: Australian Bureau of Statistics

R&D INTENSITY RELATIVE TO OTHER OECD ECONOMIES

Figure C.3 **Government and business-financed[a] GERD to GDP ratios across the OECD, 2004**

Per cent

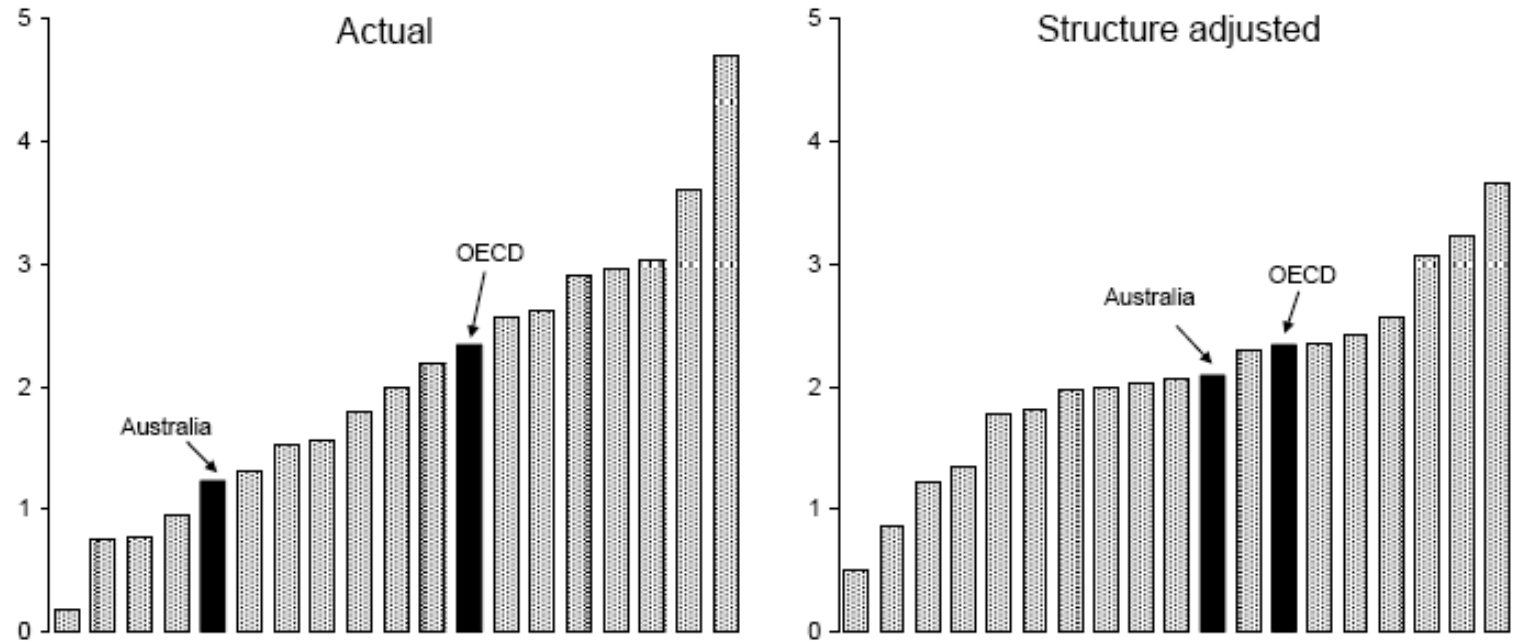


Source: Productivity Commission

PRODUCTIVITY COMMISSION CALCULATIONS ON THE IMPACT OF INDUSTRIAL STRUCTURES ON R&D INTENSITY

Figure C.9 **Comparison of actual and structure adjusted BERD intensities across OECD countries**

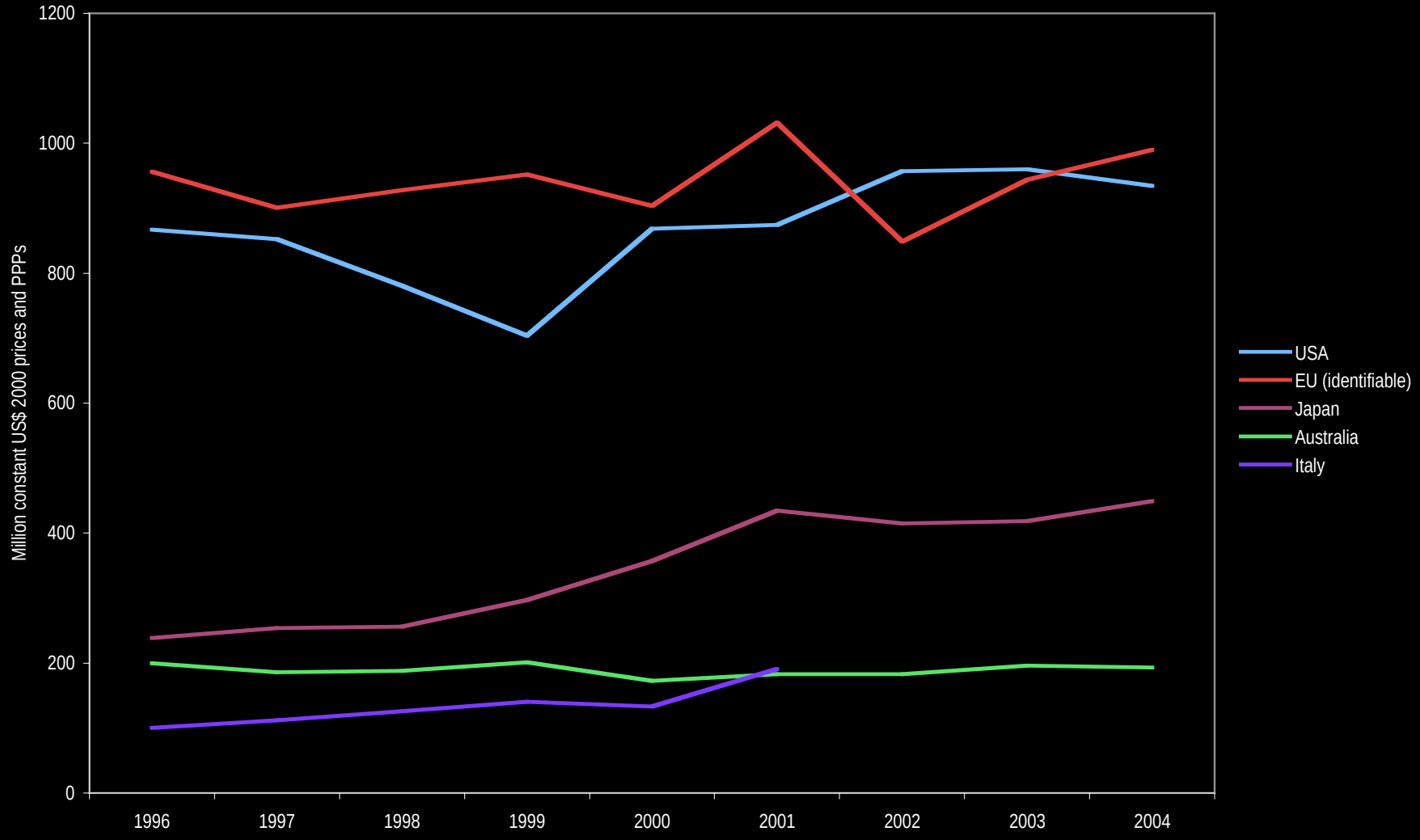
BERD/value-added ratio (per cent), 2002



Source: Productivity Commission

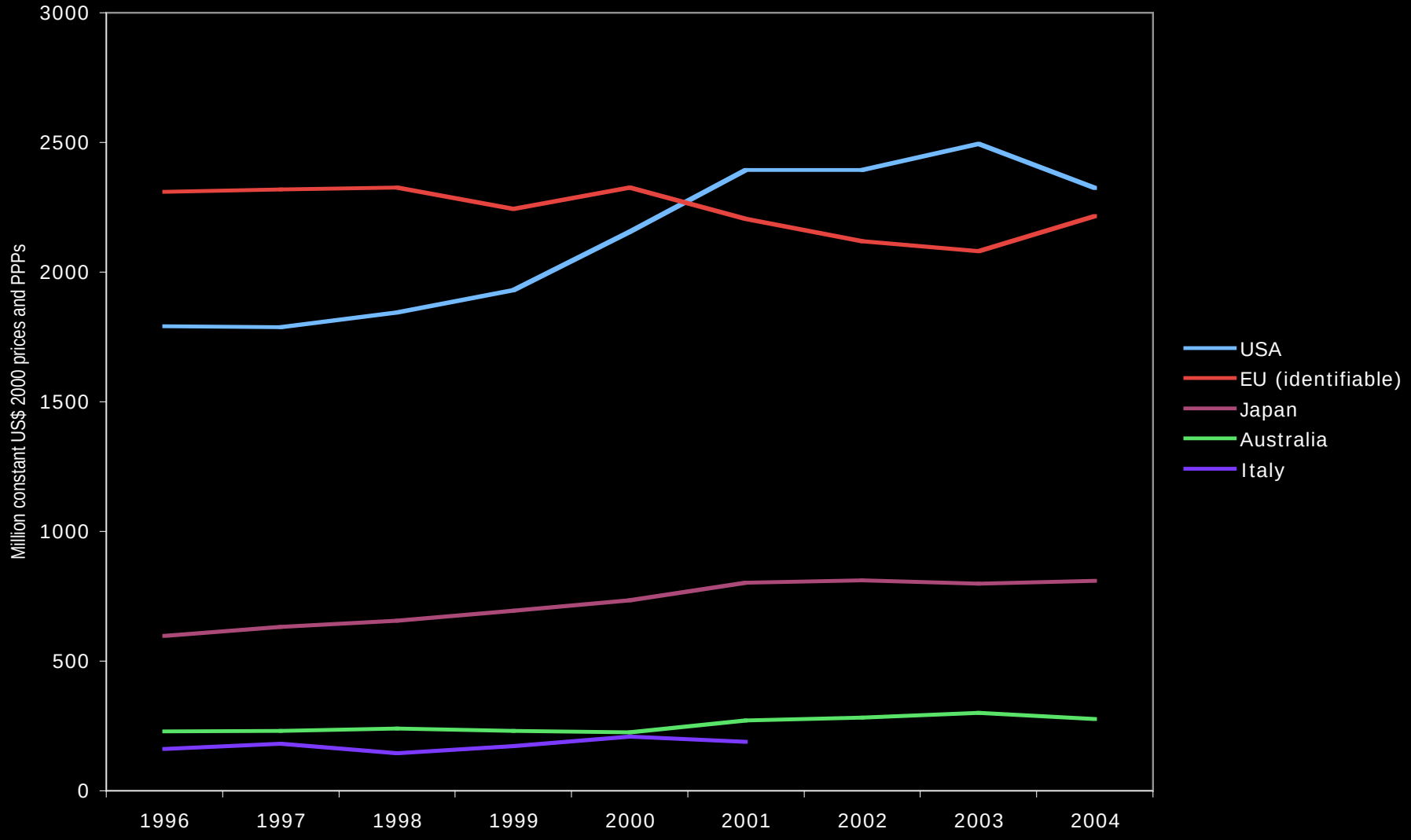
+ R&D intensity would be higher with a less natural resource oriented structure
+ Recent increased survey coverage for business R&D led to 16% increase in reported funding - so R&D intensity has been under-estimated

GOVT. APPROPRIATIONS OR OUTLAYS FOR R&D: EXPLORATION & EXPLOITATION OF THE EARTH



Source: OECD Main Science and Technology Indicators Database (Purchasing Power Parity basis)

GOVT. APPROPRIATIONS OR OUTLAYS FOR R&D: AGRICULTURE PRODUCTION AND TECHNOLOGY



Source: OECD Main Science and Technology Indicators Database (Purchasing Power Parity basis)